

IN THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claims 1 to 12 (canceled).

Claim 13 (currently amended): A PWR nuclear fuel assembly comprising:

nuclear fuel rods disposed in a substantially regular array, the array having a peripheral layer of fuel rods constituting a closed loop and an adjacent layer of fuel rods, the adjacent layer constituting a closed loop of fuel rods adjacent to and surrounded by the peripheral layer;

a supporting skeleton having two nozzles;

guide tubes for receiving control rods, said guide tubes interconnecting the nozzles;

and

spacer grids for holding the fuel rods, wherein the grids are secured to the guide tubes, the assembly further comprising:

at least one lattice reinforcing device for reinforcing the support skeleton, the lattice reinforcing device being disposed between two spacer grids and being directly secured to the guide tubes,

wherein the lattice reinforcing device does not extend between the fuel rods of the peripheral layer and between the fuel rods of the adjacent layer.

Claims 14 to 15 (canceled).

Claim 16 (previously presented): The assembly according to claim 13, wherein the lattice reinforcing device does not have an arrangement for mixing a cooling fluid that is to flow through the nuclear fuel assembly.

Claim 17 (currently amended): The assembly according to claim 13, wherein the lattice reinforcing device does not directly contact the~~have an arrangement for holding~~ nuclear fuel rods.

Claim 18 (previously presented): The assembly according to claim 13, wherein the lattice reinforcing device comprises two sets of crossed plates that are secured to one another, the plates defining between them cells for receiving guide tubes and cells for receiving nuclear fuel rods.

Claim 19 (previously presented): The assembly according to claim 17, wherein the lattice reinforcing device comprises:

two sets of crossed plates that are secured to one another, the plates defining between them cells for receiving guide tubes and cells for receiving nuclear fuel rods, and wherein the cells for receiving nuclear fuel rods are of dimensions greater than dimensions of the fuel rods so as to receive the fuel rods with clearance.

Claim 20 (currently amended): A PWR nuclear fuel assembly comprising:

nuclear fuel rods;

a supporting skeleton having two nozzles;

guide tubes for receiving control rods, said guide tubes interconnecting the nozzles;

and

spacer grids for holding the fuel rods, wherein the grids are secured to the guide tubes, the assembly further comprising:

at least one lattice reinforcing device for reinforcing the support skeleton, the lattice reinforcing device being disposed between two spacer grids and being directly secured to the guide tubes,

wherein the lattice reinforcing device does not have an arrangement for mixing a cooling fluid that is to flow through the nuclear fuel assembly, and wherein the lattice reinforcing device does not directly contact the~~have an arrangement for holding~~ nuclear fuel rods.

Claim 21 (previously presented): The assembly according to claim 20, wherein the nuclear fuel rods are disposed in a substantially regular array, the array having a peripheral layer of fuel rods constituting a closed loop, and wherein the lattice reinforcing device does not extend between the fuel rods of the peripheral layer.

Claim 22 (previously presented): The assembly according to claim 21, wherein the array has a layer of fuel rods adjacent to the peripheral layer, the adjacent layer constituting a closed loop of fuel rods adjacent to and surrounded by the peripheral layer, and wherein the lattice reinforcing device does not extend between the fuel rods of the peripheral layer and between the fuel rods of the adjacent layer.

Claim 23 (canceled).

Claim 24 (previously presented): The assembly according to claim 20, wherein the lattice reinforcing device comprises two sets of crossed plates that are secured to one another, the plates defining between them cells for receiving guide tubes and cells for receiving nuclear fuel rods.

Claim 25 (previously presented): The assembly according to claim 20, wherein the lattice reinforcing device comprises:

two sets of crossed plates that are secured to one another, the plates defining between them cells for receiving guide tubes and cells for receiving nuclear fuel rods, and wherein the cells for receiving nuclear fuel rods are of dimensions greater than dimensions of the fuel rods so as to receive the fuel rods with clearance.

Claim 26 (currently amended): A PWR nuclear fuel assembly comprising:
nuclear fuel rods disposed in a substantially regular array, the array having a peripheral layer of fuel rods constituting a closed loop;
a supporting skeleton having two nozzles;
guide tubes for receiving control rods, said guide tubes interconnecting the nozzles;
and
spacer grids for holding the fuel rods, wherein the grids are secured to the guide tubes, the assembly further comprising:
at least one lattice reinforcing device for reinforcing the support skeleton, the lattice reinforcing device being disposed between two spacer grids and being directly secured to the guide tubes,
wherein the lattice reinforcing device does not extend between the fuel rods of the peripheral layer, and wherein the lattice reinforcing device does not directly contact ~~the~~have an arrangement for holding nuclear fuel rods.

Claim 27 (previously presented): The assembly according to claim 26, wherein the array has a layer of fuel rods adjacent to the peripheral layer, the adjacent layer constituting a closed loop of fuel rods adjacent to and surrounded by the peripheral layer, and wherein the lattice reinforcing device does not extend between the fuel rods of the peripheral layer and between the fuel rods of the adjacent layer.

Claim 28 (previously presented): The assembly according to claim 26, wherein the lattice reinforcing device does not have an arrangement for mixing a cooling fluid that is to flow through the nuclear fuel assembly.

Claim 29 (previously presented): The assembly according to claim 26, wherein the lattice reinforcing device comprises two sets of crossed plates that are secured to one another, the plates defining between them cells for receiving guide tubes and cells for receiving nuclear fuel rods.

Claim 30 (previously presented): The assembly according to claim 26, wherein the lattice reinforcing device comprises:

two sets of crossed plates that are secured to one another, the plates defining between them cells for receiving guide tubes and cells for receiving nuclear fuel rods, and wherein the cells for receiving nuclear fuel rods are of dimensions greater than dimensions of the fuel rods so as to receive the fuel rods with clearance.

Claim 31 (new): The assembly according to claim 13 wherein the lattice reinforcing device is directly secured to the guide tubes by welding.

Claim 32 (new): The assembly according to claim 13 wherein the lattice reinforcing device is directly secured to the guide tubes by tube expansion.

Claim 33 (new): The assembly according to claim 13 wherein the lattice reinforcing device is directly secured to the guide tubes by sleeving.

Claim 34 (new): A PWR nuclear fuel assembly comprising:

nuclear fuel rods disposed in a substantially regular array, the array having a peripheral layer of fuel rods constituting a closed loop and an adjacent layer of fuel rods, the adjacent layer constituting a closed loop of fuel rods adjacent to and surrounded by the peripheral layer;

a supporting skeleton having two nozzles;

guide tubes for receiving control rods, said guide tubes interconnecting the nozzles;
and
spacer grids for holding the fuel rods, wherein the grids are secured to the guide tubes,
the assembly further comprising:
at least one lattice reinforcing device for reinforcing the support skeleton, the
lattice reinforcing device being disposed between two spacer grids and being secured to the
guide tubes,
wherein the lattice reinforcing device does not extend between the fuel rods of
the peripheral layer and between the fuel rods of the adjacent layer
wherein the lattice reinforcing device have cells with interior walls, the guide
tubes contacting at least some of the interior walls.